



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,152	03/30/2004	Gary A. Kinstler	BO1 - 0333US	5419
60483 7590 01/12/2007 LEE & HAYES, PLLC 421 W. RIVERSIDE AVE. SUITE 500 SPOKANE, WA 99201			EXAMINER BAE, JI H	
			ART UNIT 2115	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			01/12/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/813,152

Applicant(s)

KINSTLER, GARY A.

Examiner

Ji H. Bae

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33-38 is/are allowed.
- 6) ☒ Claim(s) 1,3-16,18-27 and 29-32 is/are rejected.
- 7) ☒ Claim(s) 2,17 and 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed on 23 October 2006 have been fully considered but they are not persuasive.

On pages 14 and 15 of applicant's remarks, applicant has argued against the examiner's prior art rejections based on Kim and Chen by alleging that neither Kim nor Chen teaches a bus interface circuit connected to a data bus:

The USB specification requires a four conductor bus, where two conductors carry power (power bus) and two conductors carry data (data bus). Since Kim fails to disclose and the Office Action failed to identify a bus interface circuit connected to a data bus, it appears that the overcurrent detector detects the current in the power bus. Thus, Kim fails to teach and/or suggest "sensing a current level in a bus interface circuit operatively connecting a node on the network the data bus" as recited in independent claims 11 and 22. Therefore, Kim fails to anticipate independent claims 11 or 22, or the claims that depend thereon [applicant's remarks, page 15, first paragraph].

In response, the examiner begins by pointing out that, by applicant's own admission, the USB specification requires a four conductor bus, with two conductors carrying power and two conductors carrying data. Since a USB is comprised of at least a "power bus" and a "data bus", the USB bus itself is also a data bus since it carries data. Additionally, Kim specifically teaches that the circuit in Fig. 3 detects overcurrent conditions in the USB hub device [col. 2, lines 22-26]. Since it has been established that a USB is inherently a data bus, and since Kim teaches that the circuit in Fig. 3 detects overcurrent conditions for a USB hub device, it then follows that the circuit in Fig.3 detects overcurrent conditions for a data bus.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2115

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-16, 20-27, 31, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim, U.S. Patent No. 6,064,554.

Regarding claim 11, Kim teaches a method comprised of:

sensing a current level in a bus interface circuit operatively connecting a node on the network to a bus [Fig. 3, overcurrent detector 140];

determining whether the sensed current level exceeds a predetermined level; and

re-initializing the bus interface circuit in response to determining that the sensed current level exceeds the predetermined level [col. 4, lines 30-41].

Regarding claim 12, Kim teaches a plurality of bus interface circuits [e.g. Fig. 3, power switch N, power interruption controller N, overcurrent detector N].

Regarding claim 13, Kim teaches isolating the bus interface circuit from a component connected to the bus upstream [power switch 120, Fig. 3, col. 4, lines 38-41].

Regarding claim 14, Kim teaches cycling power to the bus interface circuit [col. 6, lines 17-19].

Regarding claim 15, the bus interface of Kim is a physical layer controller.

Regarding claim 16, Kim teaches inhibiting a current from the bus from reaching the physical layer controller.

Regarding claims 20 and 21, Kim teaches a plurality of bus interface circuits, each with a current sensor and simultaneously implementing the protecting function [col. 6, lines 5-10].

Regarding claims 22-27, 31, and 32, Kim teaches the method of claims 11-16, 20, and 21. Kim also teaches a computer-readable medium that stores instructions implementing the claimed method.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 9, 10, 17-19, 28-30, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen, U.S. Patent Application Publication No. 2004/0229478 A1, in view of Kim, U.S. Patent No. 6,064,554.

Regarding claim 1, Chen teaches a network interface apparatus, but does not teach a bus interface circuit with current sensing and power controlling features.

Kim teaches a bus interface circuit [Fig. 3] that connect various USB peripherals to a Universal Serial Bus, comprising:

a power controller operatively connected to the bus interface circuit [signal transfer/power interruption controller 150];

a current sensor operatively connected to the bus interface circuit [overcurrent detector 140];

means for determining whether the sensed current level exceeds a predetermined level and for causing the power controller to cycle power to the bus interface circuit in response to determining that the sensed current level exceeds the predetermined level [col. 2, lines 25-40].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Kim and Chen by using the USB network interface of Chen with the USB hub of Kim. Both Kim and Chen are directed towards USB devices, and in particular, the hub of Kim is designed to be used with USB peripheral devices, such as that of Chen.

Art Unit: 2115

Regarding claim 5, Kim teaches a bus switch to isolate the bus interface circuit when the power controller cycles power to the bus interface unit [Fig. 3, power switch 120].

Regarding claim 9, Kim teaches a plurality of bus interface circuits [e.g. Fig. 3, power switch N, power interruption controller N, overcurrent detector N].

Regarding claim 10, Kim teaches sensing current levels in the first and second bus interfaces simultaneously [col. 6, lines 5-10].

### ***Allowable Subject Matter***

Claims 33-38 are allowed.

Claims 2, 17, and 28 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 2115

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ji H. Bae whose telephone number is 571-272-7181. The examiner can normally be reached on Monday-Friday, 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ji H. Bae  
Patent Examiner  
Art Unit 2115  
[ji.bae@uspto.gov](mailto:ji.bae@uspto.gov)  
571-272-7181



**CHUN CAO**  
**PRIMARY EXAMINER**